

REMARKS

These remarks are responsive to the Office Action, dated April 19, 2007. Currently, claims 1-24 are pending in the application with claims 1, 3, and 16 being independent. Claims 1, 3, and 16 are amended to expedite prosecution of this application to allowance. The support for amendments is found on page 5, paragraph [0018] of Applicants' specification.

Priority

In the April 19, 2007 Office Action, the Examiner required Applicants to submit a reference in the specification to comply with 37 C.F.R. 1.78(a). (Office Action, page 2-3). Applicants respectfully point out that a reference to the PCT application no. PCT/US04/040244 and U.S. Provisional Patent Application No. 60/526,241 was submitted in the Declaration at the time of the filing of the above application. Further, the U.S. Patent and Trademark Office has recognized a claim to priority of the present application by noting the above two application on the Official Filing Receipt. To comply with the Examiner's requirements, Applicants amended the specification to include reference and an incorporation by reference of the above two applications. Thus, Applicants believe that the present application's specification now complies with requirements of 37 C.F.R. 1.78(a).

Drawings

In the April 19, 2007 Office Action, the Examiner objected to the drawings because characters "36" and "37" have been used to designate slots. (Office Action, page 4). Applicants are respectfully submitting Replacement Sheets for figures 1 and 2 and Annotated Sheets to show changes made. Thus, this objection is now moot. The Examiner is respectfully requested to withdraw his objection.

Specification

In the April 19, 2007 Office Action, the Examiner objected to the specification because “[o]n pages 5-9 of the disclosure, the transition between pages is unclear.” (Office Action, page 4).

The specification that is currently on file appears to correspond to the published version of the PCT Application No. PCT/US04/040244. In this published PCT application, it appears that the first line on each one of the pages 1-9 is missing. Applicants are respectfully submitting a specification, as originally was filed on December 2, 2004 with the PCT Receiving Office, to substitute for the specification that is currently on file at the U.S. Patent and Trademark Office. To show that the substitute specification was filed in its original form on December 2, 2004, Applicants are also submitting a copy of an Express Mail label, which was used to mail the specification to the PCT Receiving Office on December 2, 2004 and a copy of the stamped return receipt card, which the PCT Receiving Office stamped on December 2, 2004 indicating receipt of the full specification in the present application. Applicants respectfully request that the substitute specification is accepted by the Examiner. Further, the claims as published in the PCT Application have not been affected. No new matter is being added to the specification or the claims.

35 U.S.C. 102

In the April 19, 2007 Office Action, the Examiner rejected claims 1-3, 7, 16, and 20 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,159,211 to Boriani et al. (hereinafter, “Boriani”). Applicants respectfully traverse this rejection.

Claim 1 recites, *inter alia*, a rigid cage formed in an annular configuration of a biologically inert material, and an annular side wall extending between the surfaces, a plurality

of raised ridges projecting outwardly from each of the perimeter surfaces for engaging the spinal column and securing the assembly therein and disposed at offset angles with respect to each other.

As understood by Applicants, Boriani discloses a surgical prosthetic modular device that can be used singularly or stacked together to replace excised vertebral tissue. (Boriani, Abstract). Boriani prosthetic device includes a rectangular body which is shaped and sized to conform to the disc space between adjoining vertebrae in a vertebral column. (Boriani, FIG. 1, Col. 3, lines 33-36). The rectangular body includes a top face, a bottom face, and sidewalls therebetween. (Boriani, FIG. 1, Col. 3, lines 36-37). The sidewalls define an aperture which extends through the top and bottom faces. (Boriani, FIG. 1, Col. 3, lines 38-40). However, Boriani fails to disclose a rigid cage formed in an annular configuration of a biologically inert material, as recited in claim 1. Instead, Boriani discloses a device having a rectangular body. Further, Boriani fails to disclose an annular side wall extending between the surfaces, as recited in claim 1. In contrast, Boriani's device includes a rectangular sidewall that is disposed between the top and bottom surfaces. (Boriani, FIG. 1.) This is different than the annular sidewall in the present application. Boriani fails to disclose a plurality of raised ridges projecting outwardly from each of the perimeter surfaces for engaging the spinal column and securing the assembly therein and disposed at offset angles with respect to each other, as recited in claim 1. In contrast, Boriani's top and bottom faces include ridges that run in either anterior/posterior direction or in medial/lateral direction. (Boriani, FIG. 1, Col. 3, lines 41-44). Boriani's ridges are not disposed at offset angles with respect to each other. As such, Boriani does not disclose all elements of claim 1 and claim 1 should be allowed.

Claims 2-3, 7, 16, and 20 are not anticipated by Boriani for at least the reasons stated above with regard to claim 1. Thus, the rejection of claims 2-3, 7, 16, and 20 is respectfully traversed. The Examiner is requested to reconsider and withdraw his rejection of claims 2-3, 7, 16, and 20.

In the April 19, 2007 Office Action, the Examiner rejected claims 16 and 22 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,192,327 to Brantigan (hereinafter, "Brantigan"). This rejection is respectfully traversed.

Claim 16 recites, *inter alia*, a plurality of raised ridges projecting outwardly from each of said perimeter surfaces for engaging the spinal column and securing the assembly therein and disposed at offset angles with respect to each other.

As understood by Applicants, Brantigan discloses a surgical prosthetic implant that is used singularly or stacked together to support and fuse together adjacent vertebrae or to totally or partially replace one or more vertebrae in a vertebral column. (Brantigan, Abstract). Brantigan further includes ridges that are formed longitudinally across the end faces of the implant. (Brantigan, FIG. 1, Col. 4, lines 15-19). The ridges further define peaks and valleys that are configured to allow stocking of one implant on top of the other. (Brantigan, FIGS. 1-5). Thus, Brantigan ridges are parallel to each other. This is different than the present invention, where raised ridges are disposed at offset angles with respect to each other, as recited in claim 16. As such, Brantigan fails to disclose all elements of claim 16 and claims 16 should be allowed.

Claim 22 is not anticipated by Brantigan for at least the reasons stated above with regard to claim 16. As such, the rejection of claim 22 is respectfully traversed. The Examiner is requested to reconsider and withdraw his rejection of claim 22.

In the April 19, 2007 Office Action, the Examiner rejected claims 3-6, 8-19, 21, and 23 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2004/0073314 to White et al. (hereinafter, “White”). This rejection is respectfully traversed.

Claim 3 recites, *inter alia*, a plurality of raised ridges projecting outwardly from each of the perimeter surfaces for engaging the spinal column and securing the assembly therein and disposed at offset angles with respect to each other.

As understood by Applicants, White discloses a vertebral replacement device for supporting adjacent vertebrae and that includes a vertebral body member having at least one upper or lower disc replacement member engaged thereto at one end thereof. (White, Abstract). White further includes a first end surface and a second end surface, wherein the surfaces include a plurality of grooves to increase frictional resistances between adjacent vertebral endplates. (White, FIGS. 15-20, para. [0096]). Since White includes grooves in its surfaces, they are not raised, which is contrary to the recitation of “a plurality of raised ridges” of claim 3. Further, White’s grooves are parallel to each other. (White, FIGS. 15-20). This is different than present invention’s plurality of raised ridges disposed at offset angles with respect to each other, as recited in claim 3. As such, White fails to disclose all elements of claim 3 and claim 3 should be allowed.

Claims 4-6, 8-19, 21, and 23 are not anticipated by White for at least the reasons stated above with regard to claim 3. As such, the rejection of claims 4-6, 8-19, 21, and 23 is respectfully traversed. The Examiner is requested to reconsider and withdraw his rejection of claims 4-6, 8-19, 21, and 23.

35 U.S.C. 103(a)

In the April 19, 2007 Office Action, the Examiner rejected claim 11 under 35 U.S.C. 103(a) as being unpatentable over White. This rejection is respectfully traversed. Claim 11 is dependent on the independent claim 3. As such, claim 11 is patentable over White for at least the reasons stated above with regard to claim 3.

In the April 19, 2007 Office Action, the Examiner rejected claim 24 under 35 U.S.C. 103(a) as being unpatentable over White in view of Brantigan. This rejection is respectfully traversed. Claim 24 is dependent on the dependent claim 16. As such, claim 24 is patentable over White, Brantigan and/or their combination for at least the reasons stated above with regard to claim 16.

No new matter has been added.

The claims currently presented are proper and definite. Allowance is accordingly in order and respectfully requested. However, should the Examiner deem that further clarification of the record is in order, we invite a telephone call to the Applicants' undersigned attorney to expedite further processing of the application to allowance.

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Respectfully submitted,



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